

We Claim:

- Sub A¹*
- 1) A process for delivering a complex to a cell, comprising:
 - a) forming a compound having a net charge comprising a polyion and a polymer in a solution;
 - b) adding a charged polymer to the solution in sufficient amount to form the complex having a net charge different from the compound net charge; and,
 - c) inserting the complex into a mammal.
 - 2) The process of claim 1 wherein the charged polymer comprises a polycation.
 - 3) The process of claim 2 wherein the polycation is selected from group consisting of PLL and PEI.
 - 4) The process of claim 1 wherein the charged polymer comprises a polyanion.
- Sub C²*
- 5) The process of claim 2 wherein the polyanion comprises a molecule selected from the group consisting of succinylated PLL, succinylated PEI, polyglutamic acid, polyaspartic acid, polyacrylic acid, polymethacrylic acid, dextran sulfate, heparin, hyaluronic acid, DNA, RNA, and negatively charged proteins.
 - 6) The process of claim 1 wherein the charged polymer comprises a block co-polymer.
 - 7) The process of claim 4 wherein the polyanion comprises a molecule selected from the group consisting of pegylated derivatives, pegylated derivatives carrying specific ligands, block copolymers, graft copolymers and hydrophilic polymers.
- Sub B²*
- 8) A complex for delivering a polyion to a cell, comprising:
 - a) a polyion; and,
 - b) a charged polymer wherein the polyion and the charged polymer are bound in complex, the complex having a net charge that is the same as the net charge of the charged polymer.

9) The complex of claim 8 wherein the charged polymer comprises a polycation.

Sub B³ 10) The complex of claim 9 wherein the polycation is selected from group consisting of PLL and PEI.

Sub B⁴ 11) The complex of claim 8 wherein the charged polymer comprises a polyanion.

Sub B⁴ 12) The complex of claim 9 wherein the polyanion comprises a molecule selected from the group consisting of succinylated PLL, succinylated PEI, polyglutamic acid, polyaspartic acid, polyacrylic acid, polymethacrylic acid, dextran sulfate, heparin, hyaluronic acid, DNA, RNA, and negatively charged proteins.

13) The complex of claim 8 wherein the charged polymer comprises a block co-polymer.

14) The complex of claim 11 wherein the polyanion comprises a molecule selected from the group consisting of pegylated derivatives, pegylated derivatives carrying specific ligands, block copolymers, graft copolymers and hydrophilic polymers.

Sub A⁴ 15) A drug for delivery to a cell, comprising:

- a) a polycation non-covalently attached to a polyanion; complexed with,
- b) a negatively charged polyion.

16) The complex of claim 15 wherein the polycation is selected from group consisting of PLL and PEI.

17) The complex of claim 16 wherein the negatively charged polyion comprises a molecule selected from the group consisting of succinylated PLL, succinylated PEI, polyglutamic acid, polyaspartic acid, polyacrylic acid, polymethacrylic acid, dextran sulfate, heparin, hyaluronic acid, DNA, RNA, and negatively charged proteins.

18) The complex of claim 15 wherein the negatively charged polyion comprises a molecule selected from the group consisting of ~~pegylated derivatives~~, pegylated derivatives carrying specific ligands, block copolymers, graft copolymers and hydrophilic polymers.

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